



CI/SfB

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PRODUCT DATA SHEET

ARDEX S 16 / ARDEX S 16 W

Grey or White Rapid Hardening and Rapid Drying Tile and Natural Stone Adhesives

Features

- Reduces the risk of water staining in moisture sensitive natural stones
- Can be trafficked and grouted 2-3 hours after fixing
- Suitable for fixing porcelain and fully vitrified tiles
- For internal, dry or intermittently damp locations
- For use on wall and floors
- ARDEX S 16 W is ideal for fixing light and translucent marble and other types of translucent natural stones



RAPID DRY



Binds the mix water within the adhesive or grout, virtually eliminating the risk of water staining and guaranteeing the best possible finish to all natural stone tiles. Speeds drying and hardening times irrespective of application thickness



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ARDEX UK LIMITED
Homefield Road, Haverhill, Suffolk CB9 8QP UK.
Telephone: +44 (0)1440 714939
Fax: +44 (0)1440 716640
Technical Services Fax: +44 (0)1440 716663
Email: technical.services@ardex.co.uk
ARDEX online: www.ardex.co.uk

ARDEX S 16/ARDEX S 16 W

Grey or White Rapid Hardening and Rapid Drying Tile and Natural Stone Adhesives

USE

ARDEX S 16/S 16 W are rapid hardening and drying tile adhesives with specific properties ideal for fixing moisture sensitive natural stone, as well as porcelain, mosaics, fully vitrified and ceramic tiles, and rigid foam insulating materials e.g. polystyrene etc. in internal locations. ARDEX S 16/S 16 W are suitable for floor or wall tiles, and can be used on underfloor heated screeds when used with ARDEX E 90 Mortar Admix. ARDEX S 16/S 16 W incorporates ARDEX Rapid Dry technology, meaning that the mix water is totally bound into the hardened adhesive which minimises the risk of staining to moisture sensitive natural stone tiles. ARDEX S 16 W is especially suitable for fixing translucent stones and natural stone where a light coloured background is required.

DESCRIPTION

The BS EN 12004 C2 T designation for ARDEX S 16/S 16 W classifies the adhesives as "improved fast setting cementitious adhesives with additional characteristics and reduced slip".

ARDEX S 16/S 16 W is ideal where residual moisture remaining with a normal adhesive could cause efflorescence and water staining marks in some moisture sensitive natural stone tiles. Tiles and mosaics fixed with ARDEX S 16/S 16 W can be grouted and subjected to loads only 2-3 hours after fixing at 20°C, making it particularly suitable for use in situations where the adhesive bed has to dry quickly, or the tiling has to be grouted and put into use shortly after fixing.

ARDEX S 16/S 16 W is based on special cements, high quality synthetic resins and fillers, which is mixed with water to produce a slump free, easily applied mortar with a working time of approximately 30 minutes. The mortar adheres strongly to most building materials such as concrete, cement/sand render and screeds, brickwork, blockwork, etc. In some cases surface preparation, such as priming may be required prior to fixing.

ARDEX S 16 W is not recommended for fixing tiles in swimming pools, external locations, etc. In these situations we recommend the use of ARDEX X 77 MICROTEC Flexible Wall and Floor Tile Adhesive.

SURFACE PREPARATION

The surface being adhered to must be clean, firm, free of dust, dirt, oil, grease and other barrier materials as well as being strong enough to support the weight of the tiles being fixed. Ensure that the background's required drying time, as given in the relevant part of BS 5385, is allowed to elapse prior to fixing the tiles. ARDEX S 16/S 16 W can be applied to dry or moist surfaces, e.g. cement/sand, concrete, etc., but moisture sensitive materials must be dry and remain dry after fixing. Gypsum plaster surfaces must be thoroughly dry and then primed with ARDEX P 51, diluted 1 part to 3 parts water. Wood and wood-based surfaces, e.g. blockboard, plywood, etc., should be dry, sealed on their backs and edges and rigidly braced to provide a dimensionally stable background as described in BS 5385. Tiles can then be fixed using ARDEX S 16/S 16 W, incorporating ARDEX E 90 mortar admix, after priming the face of the boards with ARDEX P 82.

Alternatively, when fixing to suitable wood-based boards on floors the use of undiluted ARDEX P 51 primer can be used. When fixing to very smooth, dense and impervious surfaces, such as existing ceramic tiles (glazed or unglazed), glazed bricks, terrazzo and to heated concrete or cement/sand screeds, ARDEX E 90 Mortar Admix should be incorporated in the ARDEX S 16/S 16 W.

For fixing large format tiles on wood floors, consult the ARDEX X 7001 product datasheet. The use of ARDEX E 90 mortar admix allows direct fixing on existing clean glazed surfaces without the need for priming.

ARDEX P 4 Primer

Solvent free, ready mixed rapid drying primer used prior to the application of ceramic tile adhesives and levelling compounds. ARDEX P 4 Primer produces a textured surface and dries in as little as one hour, it is particularly useful for tile on tile applications.

MIXING

The ARDEX S 16/S 16 W powder is added to clean water in a clean container whilst stirring and mixed thoroughly to give a slump free, easily worked mortar. The use of an ARDEX mixing paddle with a 10mm chuck, variable speed electric drill is recommended and makes light work of mixing.

The mixing proportions by volume are:

Approximately, 3 parts ARDEX S 16/S 16 W powder to 1 part water.

A 20kg bag of ARDEX S 16 requires approximately 5 - 5½ litres of water.

A 20kg bag of ARDEX S 16 W requires approximately 5½ - 6 litres of water.

The mortar is immediately ready for use and has a working time of approximately 30 minutes at a temperature of 20°C.

NOTE: Do not mix more than can be used within this time. The working time and strength development will be retarded at lower and accelerated at higher temperatures. Do not apply at temperatures below 5°C.

FIXING TECHNIQUES

For fixing ceramic tiles or mosaics, use a notched trowel to give a ribbed mortar bed on the substrate, into which the tiles are firmly bedded whilst the mortar is moist and soft.

Use a 3mm x 3mm notch at 6mm centres for mosaics and thin flat backed wall tiling, a 5mm x 5mm notch at 10mm centres for general wall tiling and 8mm x 8mm notch at 16mm centres for floor tiling. Floor tiles and tiles with keyed back profiles must also be buttered to ensure solid bedding.

The area covered with ARDEX S 16/S 16 W mortar should be limited so that tiles can be fixed within the open time. If the mortar is applied immediately after mixing, the open time is approximately 10 minutes but this time will be greatly reduced if the mixed mortar is left longer before applying.

GROUTING

Ceramic tiles and mosaics fixed in ARDEX S 16/S 16 W may be grouted as soon as the tile bed is sufficiently firm, usually 2-3 hours after fixing at 20°C. The tile joints should be grouted with the appropriate ARDEX-FLEX Flexible cement based grout. Where chemical-resistant, or impervious, easily cleaned jointing is required, we recommend ARDEX EG8 hybrid epoxide cement grouting compound.

COVERAGE

A 20kg bag of ARDEX S 16/S 16 W will yield approximately 14.7 litres of mortar, using approximately 1.35kg of powder per m² per mm thickness of adhesive bed. The actual coverage achieved in practice will depend on the back profile of the tile and notched trowel and technique used to bed the tiles e.g. a 20kg bag of ARDEX S 16/S 16 W will cover approximately 8.4m² when using a 5mm x 5mm square toothed and notched trowel held at an angle of 45 degrees.

PACKAGING

ARDEX S 16/S 16 W is packed in paper sacks incorporating a polyethylene liner - net weight 20kg.

STORAGE AND SHELF LIFE

ARDEX S 16/S 16 W must be stored in unopened packaging, clear of the ground in cool dry conditions and be protected from excessive draught. If stored correctly, as detailed above, the shelf life of this product is 12 months from the date shown on the packaging.

PRECAUTIONS

ARDEX S 16/S 16 W is considered non-hazardous in normal usage. The presence of cement in the product gives an alkaline mortar which may cause some local irritation if prolonged contact with the skin takes place. Care should be taken to avoid inhalation or ingestion of dust and prevent contact with the eyes.

For further information, consult the relevant health and safety data sheet.

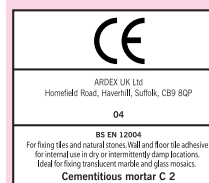
TECHNICAL DATA

Bulk density of powder	approximately	1.3kg/litre
Weight of fresh mortar	approximately	1.8kg/litre
Initial Set (Vicat) DIN 1164	approximately	1/2 hour at 20°C
Final Set (Vicat) DIN 1164	approximately	1 hour at 20°C
Compressive Strength (DIN 1164)		
After 3 hours		5.2 N/mm ²
After 6 hours		9.0 N/mm ²
After 1 day		13.0 N/mm ²
After 28 days		18.0 N/mm ²
Tensile Bending Strength (DIN 1164)		
After 3 hours		1.8 N/mm ²
After 6 hours		2.6 N/mm ²
After 1 day		4.2 N/mm ²
After 28 days		5.0 N/mm ²
Ball Pressure Hardness (Brinell)		
After 28 days		50.0 N/mm ²
Early Tensile Adhesion Strength Development (DIN 18156-M)		
After 3 hours		0.8 N/mm ²
After 6 hours		1.2 N/mm ²
After 1 day		1.8 N/mm ²

Suitable for underfloor heating: Yes with addition of ARDEX E 90 Admix

PROPERTIES TESTED TO THE REQUIREMENTS OF BS EN 12004

Tensile Adhesion Strength	Greater than 1 N/mm ² under all test conditions.
Slip Resistance	Slip - less than 0.5mm



NOTE: The information supplied in our literature or given by our employees is based upon extensive experience and, together with that supplied by our agents or distributors, is given in good faith in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our products; however, as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.

Country specific recommendations, depending on local standards, codes of practice, building regulations or industry guidelines, may affect specific installation recommendations.

TECHNICAL ADVICE HELPLINE:
01440 714939
ARDEX online: www.ardex.co.uk